

Confidential Collaborative Data Processing Secured by Cryptography

**How to harness the value of your data
and monetize it while guaranteeing
security and privacy.**



Everyday, organizations need to exploit results from processing sensitive data. And look for ways to counter risks attached to using sensitive data.



GDPR Risk

Will necessary processes be followed?



Cloud Act Risk

Can the cloud be trusted ?



Cyber Risk

Can my data leak ?

Cosmian lowers the risks attached to use sensitive data.

**The data is never shared, exposed, accessed in clear text.
You can focus on exploiting results.**

COSMIAN is an Enterprise software editor.

COSMIAN leverages the most advanced cryptographic techniques to unblock high value data-driven projects.

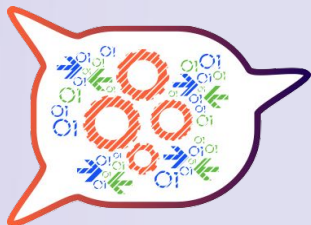
In collaboration with the world-renowned ENS Ulm/CNRS/INRIA Computer Sciences Laboratory headed by M. David Pointcheval.
And world-renowned cryptologist - M. Nigel Smart , Professor, COSIC//Computer Security & Industrial Cryptography group, KU Leuven.



Cosmian CipherCompute.

Secure and Protect Collaborative Computing

Alice and Bob (and Charlie & Dana...) can launch collaborative computing over protected data without revealing the underlying owned data



Protect data against other participants.

Cosmian ZeroTrust.

Secure Data at rest and during computation in ZeroTrust Environment

Alice wants to move logs and transactions to the cloud - and she wants to perform queries without letting the cloud provider to learn nor the data nor the requests.



Protect data against the environment.

Cosmian brings its expertise in advanced cryptography software to help you deploy your highly valuable data-driven projects .

Summit #1:
SECURE DATA
AT REST



Summit #2:
SECURE DATA
AT RUNTIME



TOP OF THE WORLD:
COLLABORATIVE DATA COMPUTATION
WITHOUT EVER REVEALING
THE UNDERLYING DATA.



GREEN ROUTE:
Fully Encrypted Data Processing
data stay encrypted during
computation, never revealed nor
accessed in clear text.

YELLOW ROUTE:
Multi-Party Computation - Secure Enclave
data stay in clear text, and processed
through cryptographic-protected process
environments.

A Paradigm Change in how to process sensitive data.

GDPR made easier to comply with.

No more data moving around to be processed across business units.

No more liability to transfer and track.

Reconcile cloud computing power with confidentiality

Operate business as usual while operating data and apps in the cloud.

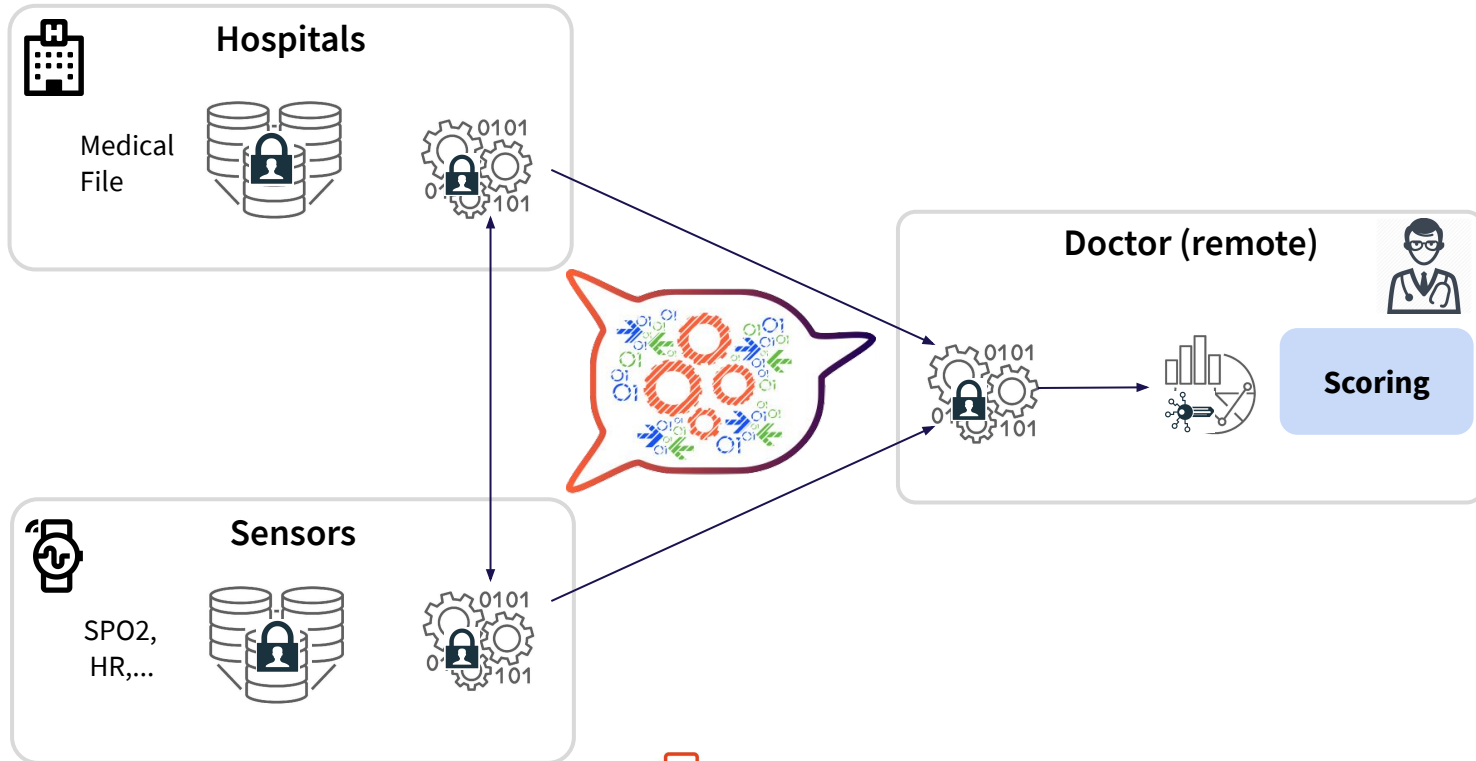
Cloud can't learn neither from your data nor your computations.

Cybersecurity: Augment SOCs & CERTs interconnected collaborations.

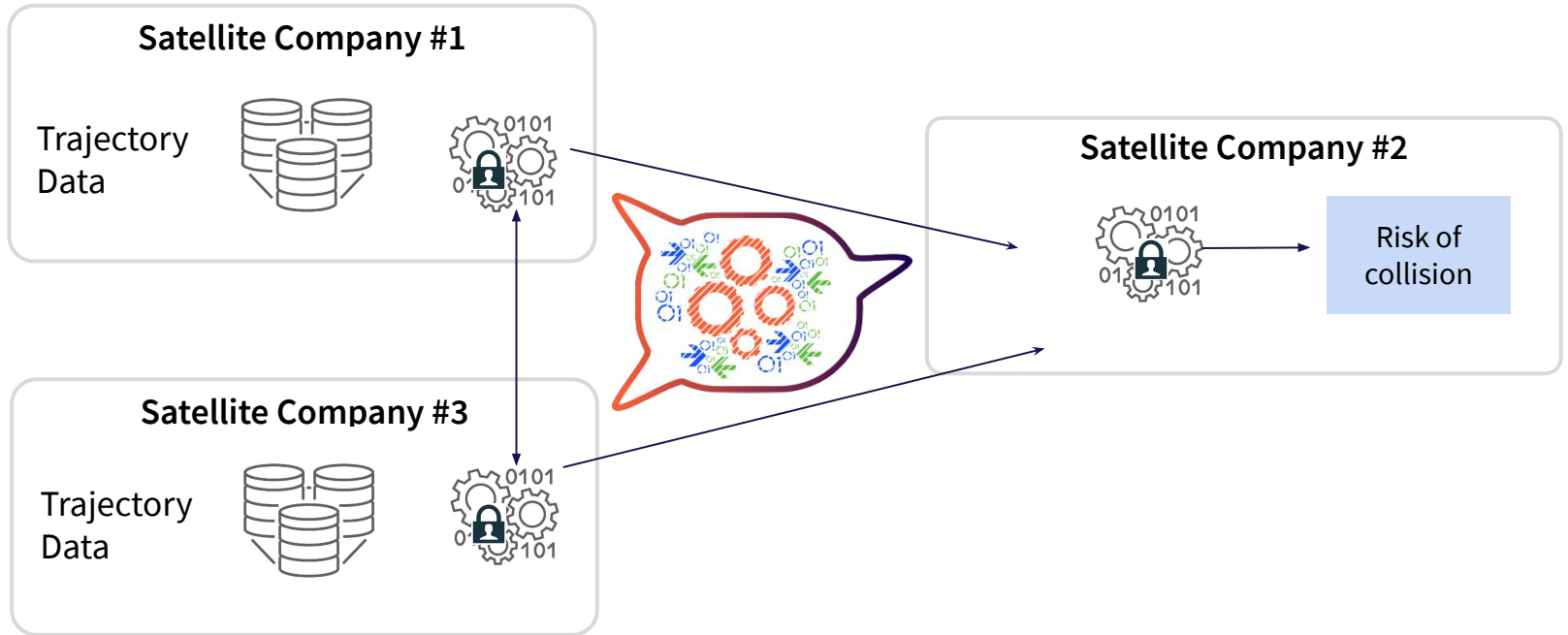
Detection of suspicious common events without accessing data.

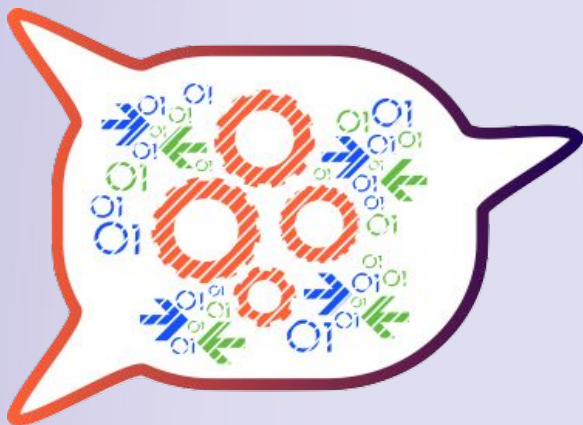
Deploy highly sensitive markers in your detection systems (and your suppliers' systems) without ever exposing the markers.

Use Case: pathology scoring algorithm over combined data



Use Case: Multi-Party Analysis of Satellite Trajectories between competitors





Cosmian CipherCompute in action:

- Calculations are only activated if all participating entities have agreed upfront on the calculation itself.
- Explicit authorization of the computation performed over virtually pooled data
- Calculations require explicit authorization to process sensitive data.
- Result access control
- Control of the engagement level of each participant
- Authorization Management via a simple UI

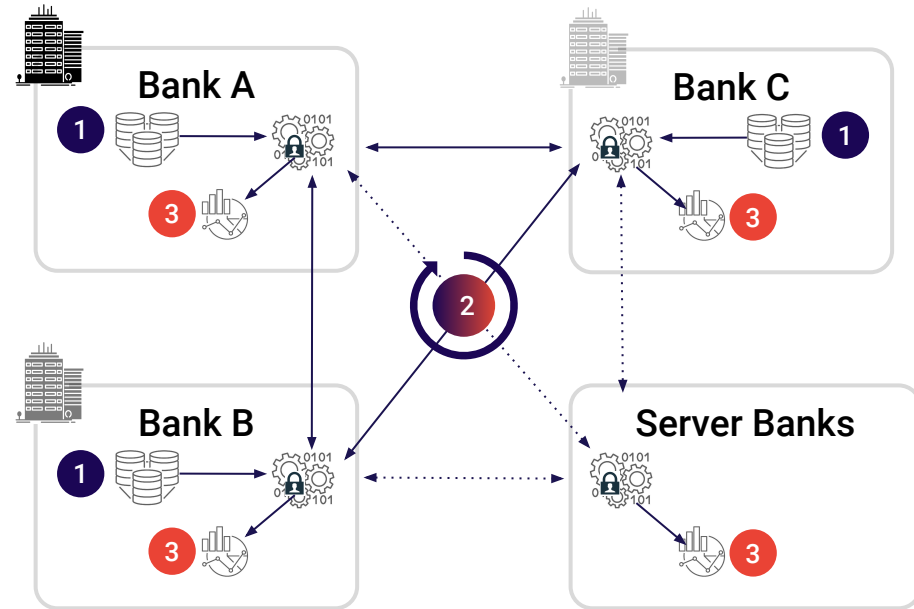


Use case: Financial Services

How to process KPIs on fraudulent IBANs

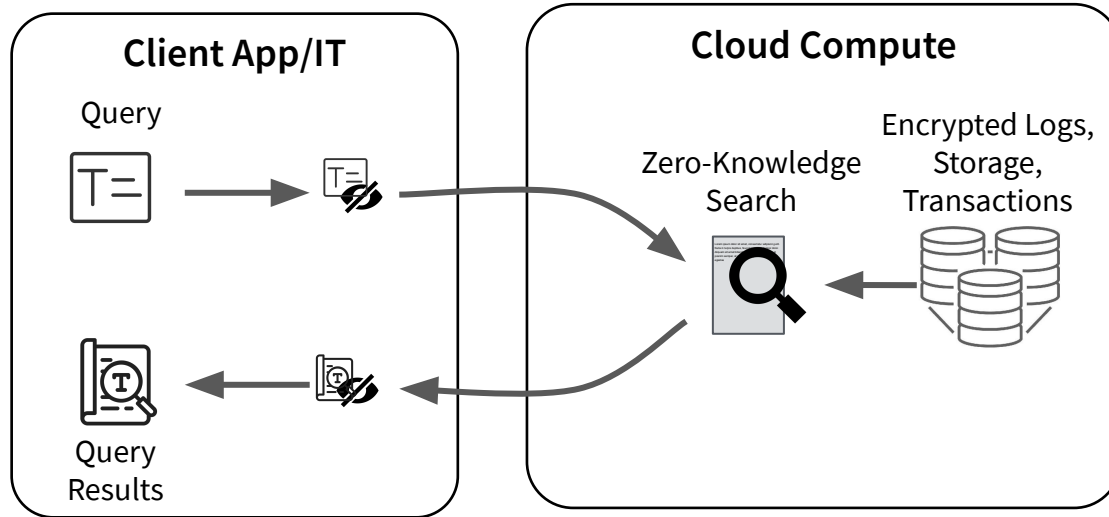
Server Banks: defines collaborative calculations as agreed by banks and guarantees each participants' engagement.

- 1 Input**
User data/transactions
- 2 Secured collaborative computation**
Statistics on pooled data
- 3 Output**
Calculation results, KPIs





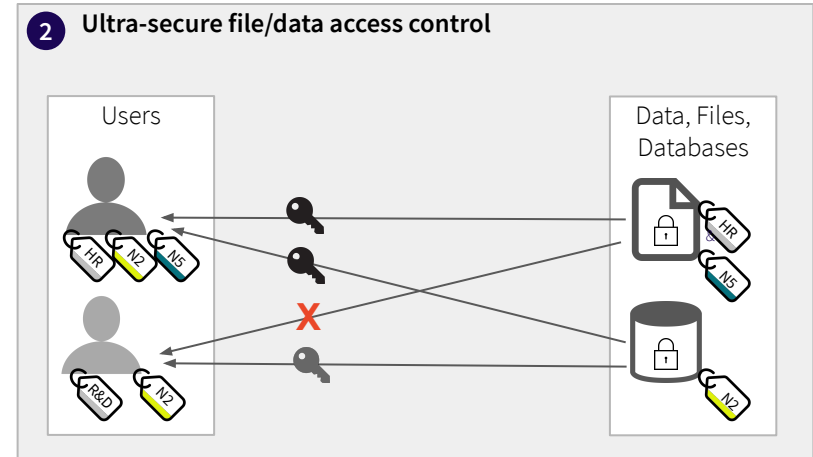
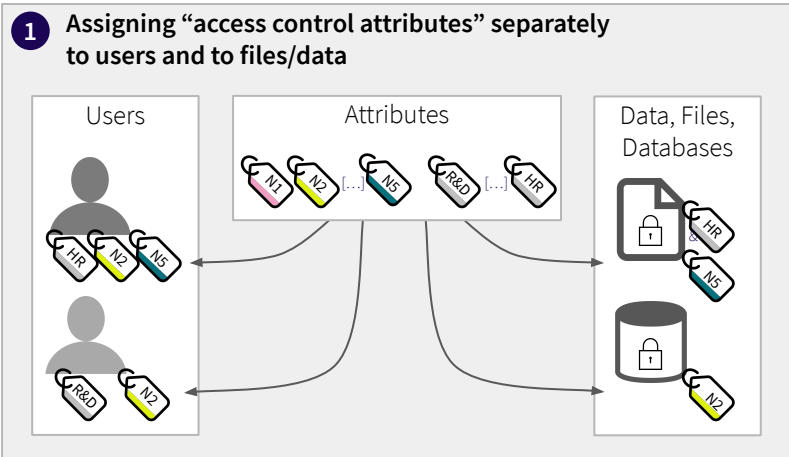
Use case: How to prevent the cloud from learning what is searched Blind Search of sensitive information on cloud



- Exploit cloud storage and computation without losing control of confidential assets
- Data Confidentiality Protection
- Blind Keyword search & threshold



Zero-trust data security powered by advanced encryption - to improve security in management & maintenance of access rights to data in the cloud.



- Data encryption embeds “access control attributes” at the data level vs centralized software solutions
 - prone to cyber attacks
- Application-independent
- Cloud-independent
- Supports multiple organizations

How to quick start together:

1. Identify how to increase your highly valuable data-driven opportunities.

2. Support quick win, realistic use cases:

- Demonstrate the value in operational conditions
- Help the teams to gain technical knowledge
- Validate IT deployment scenarios

3. Execution + results analysis to best prepare for production phase/scaling/itérations



Welcome to the top.

Sandrine Murcia
CEO & Co-Founder
sandrine@cosmian.com

